



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7348/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Golden Iron Resources Ltd

1.3. Property details

Property: Mining Lease 77/427
Local Government Area: Shire of Yilgarn
Colloquial name: Mt Dimer Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
21.35		Mechanical Removal	Tailings Storage Facility

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 05 January 2017

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	The clearing permit application area has been broadly mapped as the following two Beard vegetation associations (GIS Database): 141: Medium woodland; York gum, salmon gum & gimlet 538: Shrublands; <i>Acacia brachystachya</i> scrub
Clearing Description	Mt Dimer Project. Golden Iron Resources Ltd proposes to clear up to 21.35 hectares of native vegetation within a total boundary of approximately 29.30 hectares for the purpose of developing a tailings storage facility. The project is located approximately 120 kilometres north east of Southern Cross, in the Shire of Yilgarn.
Vegetation Condition	Pristine: No obvious signs of disturbance (Keighery, 1994). To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).
Comment	The vegetation condition was derived from a flora and vegetation survey undertaken by Western Botanical (2016)

3. Assessment of Application against Clearing Principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**
The application area occurs within the Southern Cross (COO2) subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by gently undulating uplands dissected by broad valleys with bands of low greenstone hills (CALM, 2002). Diverse Eucalyptus woodlands rich in endemic Eucalyptus occur around salt lakes, low greenstone hills, valley alluvials and broad plains of calcareous earths (CALM, 2002). Mallees and scrub-heaths occur on uplands as well as sand lunettes associated with playas along the broad valley floors and sand sheets around the granite outcrops. The scrubs are rich in endemic acacias and Myrtaceae (CALM, 2002).

A Level 1 flora and vegetation survey was undertaken over the Mt Dimer project area (inclusive of the application area) in May to June of 2016 by Western Botanical (2016). A total of 152 species consisting of 40 families and

75 genera were identified. No Priority or Threatened flora were recorded within the application area (Western Botanical, 2016). No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) are known to occur within the application area (GIS Database) and none were identified during the flora and vegetation survey (Western Botanical, 2016). Two beard vegetation associations are located within the application area, 141 and 538. Both are well represented at a local, bioregional, and state level.

Several weed species were recorded within the application area (Western Botanical, 2016). Weeds have the potential to out-compete native flora and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology CALM (2002)
Western Botanical (2016)

GIS Database:

- IBRA Australia
- Pre-European vegetation
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments **Proposal may be at variance to this Principle**

A fauna survey was undertaken over the Mt Dimer project area by Bamford Consulting Ecologists in May of 2016 (Bamford Consulting Ecologists, 2016). A total of 57 fauna species were recorded during the field survey, comprising six reptiles, 38 birds, six native mammals, four introduced mammal species, one invertebrate, and two amphibians (Bamford Consulting Ecologists, 2016). Based on available habitat, the application area is considered likely to support the following species of conservation significance (Bamford Consulting Ecologists, 2016):

- Malleefowl (*Leipoa ocellata*) – VU under the WC Act
- Peregrine falcon (*Falco peregrinus*) – OS under the WC Act
- Rainbow bee-eater (*Merops ornatus*) – IA under the EPBC Act
- Fork-tailed swift (*Apus pacificus*) – IA under the WC Act
- Night parrot (*Pezoporus occidentalis*) – CR under the WC Act
- Tree-stem trapdoor Spider (*Aganippe castellum*) – Priority 4 as listed by DPaW
- Central long-eared Bat (*Nyctophilus major tor*) – Priority 4 as listed by DPaW

Several locally significant bird species are also likely to exist within the application area including the Square-tailed kite (*Lophoictinia isura*), Rufous tree-creeper (*Climacteris rufus*), Blue-breasted fairy-wren (*Malurus pulcherrimus*), Redthroat (*Pyrholaemus brunneus*), Shy heathwren (*Hylacola cauta*), Western yellow robin (*Eopsaltria griseogularis*), Southern scrub-robin (*Drymodes brunneopygia*), White-browed babbler (*Pomatostomus superciliosus*), Gilbert's whistler (*Pachycephala inornata*), Australian bustard (*Ardeotis australis*), Bush-stone curlew (*Burhinus grallarius*) and Crested bellbird (*Oreoica gutturalis*).

The Malleefowl is a threatened species listed as a Matter of National Environmental Significance (MNES) under the *Environmental Protection and Biodiversity Conservation Act*. Bamford Consulting Ecologists (2016) did not find any active mounds within or in close proximity to the application area. However, tracks and several old mounds were recorded within or in close proximity to the application area and it is known that Malleefowl return to reuse old mounds and build new ones (Bamford Consulting Ecologists, 2016). Therefore, it is possible that an active Malleefowl mound may be within or in close proximity to the application area when clearing occurs. Potential impacts to Malleefowl as a result of the proposed clearing may be minimised by the implementation of a Malleefowl management condition.

The Rainbow bee-eater, Peregrine Falcon, and Fork-tailed Swift are wide ranging species and are not confined to a specific habitat (Bamford Consulting Ecologists, 2016). Given their large ranges significant impacts to these species as a result of the proposed clearing are considered unlikely.

The Night Parrots habitat preferences suggest it prefers spinifex grasslands and samphire/chenopod shrublands. Given the limited amount of suitable habitat, it is considered possible, but very unlikely to utilise the project area (Bamford Consulting Ecologists, 2016).

Tree-stem trapdoor spider burrows were recorded throughout the study area (Bamford Consulting Ecologists, 2016). The species appears to be widespread and common throughout the Helena and Aurora Range, Koolyanobbing and Mt Jackson area (Bamford Consulting Ecologists, 2016). Given their wide range, significant impacts to the local population as a result of the proposed clearing are considered unlikely.

Some habitat suitable for the Central long-eared Bat and the locally significant bird species listed above will be impacted by the proposed clearing (Bamford Consulting Ecologists, 2016). However, given the suitable habitat that exists in the surrounding area, impacts to these species are considered to be minor (Bamford Consulting Ecologists, 2016; GIS Database).

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Bamford Consulting Ecologists (2016)

GIS Databae
- DPaW Tenure

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not likely to be at variance to this Principle**

According to available datasets, there are no known records of Threatened flora within the application area (GIS Database). No Threatened flora was identified during a flora and vegetation survey of the application area (Western Botanical, 2016).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Western Botanical (2016)

GIS Databae:
- Threatened and Priority Flora List

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not likely to be at variance to this Principle**

According to available databases, there are no known TECs within the application area (GIS Database). No TECs were identified during a flora and vegetation survey of the application area (Western Botanical, 2016).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Western Botanical (2016)

GIS Database:
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Ecological Communities Boundaries

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal is not at variance to this Principle**

The application area occurs within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, in which approximately 98.0% of the pre-European vegetation remains (see table below) (GIS Database; Government of Western Australia, 2015)

The vegetation within the application area has been mapped as Beard vegetation association 141 and 538 (GIS Database). Vegetation associations 141 and 538 are both well represented at both a state and bioregional level as shown in the table below. Given the amount of vegetation remaining in the local area and bioregion, the vegetation proposed to be cleared is not considered to represent remnant vegetation.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion - Coolgardie	12,912,204	12,648,491	~98.0	Least Concern	~16.4
Beard vegetation associations - State					
141	1,158,760	960,759	~82.9	Least Concern	~35.3
538	147,821	144,203	~97.6	Least Concern	~34.0
Beard vegetation associations - Bioregion					
141	883,085	858,525	~97.2	Least Concern	~46.1
538	127,882	124,867	~97.6	Least Concern	~27.2

* Government of Western Australia (2015)

** Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2015)

GIS Database:
- IBRA Australia
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments **Proposal is not at variance to this Principle**

According to available databases, there are no permanent or ephemeral watercourses or wetlands within the application area (GIS Database). The vegetation proposed to be cleared is not growing in association with any watercourses or wetlands (GIS Database; Golden Iron Resources, 2016). The nearest water body is an unnamed lake, located approximately six kilometres north east of the application area (GIS Database).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Golden Iron Resources (2016)

GIS Database:
- Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal is not likely to be at variance to this Principle**

The application area is mapped as being composed of undulating terrain with small gently sloping plains and some ranges on basic schists, gneisses, and allied rocks: chief soils seem to be neutral red earths with a variable content of ironstone gravel (Northcote et al. 1960-68; GIS Database). Part of the application area has been previously cleared and during this time no signs of significant land degradation were noted (Golden Iron Resources, 2016).

The proposed clearing is unlikely to cause appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Golden Iron Resources (2016)
Northcote et al (1960-68)

GIS Database:
- Soils, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal is not likely to be at variance to this Principle**

According to available databases, the application area is not located within a conservation area (GIS Database). The nearest known conservation area is the Helena and Aurora Ranges Conservation Park located approximately 1.5 kilometres west of the application area (GIS Database). Given the small scale of the proposed clearing (21.35 hectares) and the size of the conservation area (103,249 hectares), the proposed clearing is unlikely to significantly impact on the environmental values of any conservation areas.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DPaW Tenure
- Imagery

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments Proposal is not likely to be at variance to this Principle

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The application area lies within the Goldfields Groundwater Area (GIS Database). Groundwater within the application area is saline, between 14,000 – 35,000 milligrams per litre of dissolved salts (GIS Database). Given the groundwater is already saline, the small amount of clearing proposed is unlikely to alter existing groundwater quality.

Given that there is low average rainfall (300 millimetres) in the Kalgoorlie-Boulder area (BoM, 2016) and there are no watercourses within the application area, the proposed clearing is not likely to cause sedimentation or deteriorate the quality of surface water in nearby areas.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology BoM (2016)

GIS Database:

- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- RIWI Act, Groundwater Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposal is not likely to be at variance to this Principle

The application area receives an average annual rainfall of approximately 270 millimetres (BoM, 2016). Based on an average annual evaporation rate of 2600 – 2800 millimetres (BoM, 2016), any surface water resulting from rainfall events is likely to be relatively short lived.

The application area is located within the Swan Avon/Yilgarn River catchment area which covers 5,838,600 hectares (GIS Database). Given the size of the area to be cleared (21.35 hectares) in relation to the size of the catchment area, the proposed clearing is not likely to increase the incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology BoM (2016)

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are no Native Title Claims over the area under application (DAA 2016). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance that intersect with the application area (DAA, 2016). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, the Department of Water, and the Department of Parks and Wildlife, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 21 November 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology DAA (2016)

4. References

- Bamford Consulting Ecologists (2016) Golden Iron Resources Ltd Fauna Assessment, Mount Dimer Project Area. Report prepared for Golden Iron Resources Ltd, by Bamford Consulting Ecologists, September 2016.
- BoM (2016) Climate Statistics for Australian Locations, Kalgoorlie-Boulder. Bureau of Meteorology. <http://www.bom.gov.au> (Accessed 1 December 2016).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, Western Australia
- DAA (2016) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 1 December 2016).
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Golden Iron Resources (2016) Additional information received in relation to CPS 7348/1. Golden Iron Resources, November 2016.
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Department of Environment and Conservation, Western Australia, June 2015.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Western Botanical (2016) Interim Report on the Flora and Vegetation of the Mount Dimer Tenements, Level 1 Targeted Priority Flora Assessment. Report prepared for Golden Iron Resources Ltd, by Western Botanical, June 2016.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPac	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

- CR Critically endangered species**
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EN Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- VU Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
- EX Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
- IA Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- CD Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
- P1 Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3

Priority Three - Poorly-known species:

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4

Priority Four - Rare, Near Threatened and other species in need of monitoring:

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.